



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,657	03/25/2004	Hajime Kanazawa	1232-5358	6105
27123 7590 01/19/2007 MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER LEE, SHUN K	
			ART UNIT	PAPER NUMBER
			2884	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/808,657

Applicant(s)

KANAZAWA ET AL.

Examiner

Shun Lee

Art Unit

2884

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 and 14 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8 December 2006 has been entered.

### ***Specification***

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Objections***

3. Claims 1 and 4 are objected to because of the following informalities:
- (a) in claim 1, "a stage having a spherical surface that has a center at the condensed point and being rotatable around an optical axis of the condenser mirror" on lines 16-17 should probably be --a stage having a spherical surface and being rotatable around an axis--; and
  - (b) in claim 4, "a stage having a plane surface and being rotatable around an optical axis of the condenser mirror" on lines 11-12 should probably be --a stage having a plane surface and being rotatable around an axis--.

It should be noted that expressions relating the apparatus to the relative location of a source (e.g., the source's condensed point and/or optical axis) during an intended operation are of no significance in an apparatus claim (MPEP § 2115). Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berger (US 6,781,135) in view of Berger (US 6,906,781) and Stuik *et al.* (Absolute calibration of a multilayer-based XUV diagnostic, Nuclear Instruments & Methods in Physics Research A, Vol. 492, no. 1-2 (11 October 2002), pp. 305-316).

The preamble recitation of “a light source having a condenser mirror which condenses the light emitted from an emission point onto a condensed point” was given no significance in determining patentability of the apparatus claim(s) since the preamble recitation appears to be merely statements of intended use and does not imply any additional limiting structure (MPEP § 2111.02).

In regard to claim 1, Berger discloses (US 6,781,135 column 6, lines 5-26; Figs. 1 and 2) a light intensity distribution measuring apparatus for measuring a light intensity distribution in light with a wavelength of 20 nm or smaller (US 6,781,135 column 1, lines 39-42) emitted from a light source, said light intensity distribution measuring apparatus comprising plural light intensity detector units (60) each including a mirror (70) and a photoelectric conversion element (72), each of incident angles of a light incident upon each mirror (70) of the plural light intensity detector units (60) being a predetermined angle (*i.e.*, “calibrated angle”; US 6,781,135 column 5, lines 26-49). The apparatus of Berger lacks an explicit description that the plural light intensity detector units are arranged on a spherical surface of a stage that is rotatable around an optical axis of the light source and has a center at a condensed point defined by the light source. However, Berger also discloses (US 6,781,135 column 6, lines 5-27) to position detectors so that each bore was oriented facing the source. Further, Berger teaches (US 6,906,781 column 2, line 53 to column 3, line 10) to arrange plural light intensity detector units on a rotatable stage, in order to obtain the spatial distribution of intensity (*i.e.*, intensity profile; US 6,906,781 column 2, lines 21-23 and 35-36). In addition, Stuik *et al.* teach (section 1 on pg. 305-306) that each source possesses

Art Unit: 2884

specific spatial distribution, repetition rate, and stability. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to arrange a finite set of detectors onto a surface which faces the source and to repetitively measure the light at different measurement positions (*e.g.*, by rotation of the finite set of detectors around an optical axis of the light) in the light in the apparatus of Berger, in order to determine specific spatial distribution, repetition rate, and stability of a source while using only a finite set of detectors.

In regard to claim 4, Berger discloses (US 6,781,135 column 6, lines 5-26; Figs. 1 and 2) a light intensity distribution measuring apparatus for measuring a light intensity distribution in light with a wavelength of 20 nm or smaller (US 6,781,135 column 1, lines 39-42) emitted from a light source, said light intensity distribution measuring apparatus comprising plural light intensity detector units (60) each including a mirror (70) and a photoelectric conversion element (72), each of incident angles of a light incident upon each mirror (70) of the plural light intensity detector units (60) being a predetermined angle (*i.e.*, "calibrated angle"; US 6,781,135 column 5, lines 26-49). The apparatus of Berger lacks an explicit description that the plural light intensity detector units are arranged on a plane surface of a stage that is rotatable around an optical axis of the light. However, Berger also discloses (US 6,781,135 column 6, lines 5-27) to position detectors so that each bore was oriented facing the source. Further, Berger teaches (US 6,906,781 column 2, line 53 to column 3, line 10) to arrange plural light intensity detector units on a rotatable stage, in order to obtain the spatial distribution of intensity (*i.e.*, intensity profile; US 6,906,781 column 2, lines 21-23 and

Art Unit: 2884

35-36). In addition, Stuik *et al.* teach (section 1 on pg. 305-306) that each source possesses specific spatial distribution, repetition rate, and stability. Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to arrange a finite set of detectors onto a surface which faces the source and to repetitively measure the light at different measurement positions (e.g., by rotation of the finite set of detectors around an optical axis of the light) in the light in the apparatus of Berger, in order to determine specific spatial distribution, repetition rate, and stability of a source while using only a finite set of detectors.

#### ***Response to Arguments***

7. Applicant's arguments with respect to amended claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shun Lee whose telephone number is (571) 272-2439. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2884

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SL

  
CONSTANTINE HANNAHEER  
PRIMARY EXAMINER